
Training Procedure for Chemistry Technician III

- 1.0 Purpose** – The State Crime Laboratory Drug Chemistry Section Chemistry Technician III Training Program is a study of evidence handling, equipment maintenance, lab hygiene, lab process assistance, administrative duties and courtroom testimony that are part of the Technician’s job responsibilities. The practical/laboratory exercises are intended to give the trainee experience performing job functions and to demonstrate ability to perform job functions independently. The trainee will be required to pass a written exam with a minimum score of 85 % and to complete all practical exercises successfully. The Toxicology Training Coordinator shall prepare a Training Section Completion Summary detailing training activities and evaluating progress. Upon successful completion of each training section, the Toxicology Training Coordinator and the trainee shall sign/initial the Training Checklist and a Training Section Completion Summary.
- 2.0 Scope** - This procedure applies to technician trainees in the Drug Chemistry Section Toxicology Unit of the State Crime Laboratory.
- 3.0 Objectives**
- 3.1** Successfully complete required basic training (refer to the State Crime Laboratory [Procedure for Personnel Training](#)).
 - 3.2** Know and understand the Laboratory and Section policies and procedures governing evidence handling, note taking, and report writing.
 - 3.3** Be able to perform note taking and report writing properly using the computer software currently in use at the State Crime Laboratory.
 - 3.4** Be familiar with the [Drug Chemistry Abbreviation List](#) for acceptable notations used in casework.
 - 3.5** Be able to perform routine maintenance for each of the following instruments and items of laboratory equipment: top loading balance, analytical balance, pH meter, toxicology evidence refrigerators and reagent refrigerators.
 - 3.6** Be able to perform lab hygiene duties.
 - 3.7** Become a Notary Public and be able to notarize DWI revocation reports.
 - 3.8** Be able to maintain Drug Chemistry and Toxicology supplies.
 - 3.9** Be able to perform Drug Chemistry Section vehicle responsibilities.
 - 3.10** Be able to monitor rush case assignments.
 - 3.11** Testify about evidence handling for the State Crime Laboratory.
 - 3.12** Successfully complete a written exam.
 - 3.13** Successfully complete a competency exam.
 - 3.14** Successfully complete a moot court.

4.0 Procedure – Evidence Handling

4.1 Receiving Evidence

4.1.1 Toxicology evidence shall be received from the Evidence Control Unit. The Chemistry Technician III shall demonstrate the ability to retrieve toxicology evidence from the Evidence Control Evidence Retention Vault in order to prepare cases for transfer to analysts according to the State Crime Laboratory [Procedure for Evidence Management](#) and [Procedure for Toxicology Evidence Management](#).

4.1.1.1 The Chemistry Technician III shall ensure that evidence packaging is in a properly sealed condition. If the packaging seal does not meet policy, the technician shall remediate the seal and document the remediation in FA (Forensic Advantage) Laboratory Information Management (LIMS) software.

4.1.1.2 The Chemistry Technician III shall mark received evidence.

4.1.1.3 The Chemistry Technician III shall maintain custody of received evidence until it is transferred to an analyst or general storage.

4.2 Opening and Evidence Preparation

4.2.1 The Chemistry Technician III shall demonstrate the ability to open the packaging for toxicology cases and remove items of evidence for transfer to an analyst. Toxicology evidence shall be handled according to the State Crime Laboratory [Safety Manual](#) and marked according to the State Crime Laboratory [Procedure for Toxicology Evidence Management](#).

4.2.1.1 Discuss normal/abnormal evidence appearance with the Toxicology Training Coordinator or designee.

4.2.1.1.1 Small blood volume is considered to be less than 10 % of the tubes intended collection volume (e.g., less than 1 milliliter of blood in a 10 milliliter tube).

4.3 Transfer Evidence

4.3.1 The Chemistry Technician III shall demonstrate the ability to transfer properly sealed and labeled evidence to the appropriate toxicology analyst or general storage for analysis according to the State Crime Laboratory [Procedure for Evidence Management](#).

4.3.1.1 The Chemistry Technician III shall complete the following:

4.3.1.1.1 Make the assignment in FA.

4.3.1.1.2 Transfer retained packaging and evidence to the analyst or general storage, and document the transfer in FA.

4.3.1.1.3 Transfer the case record in FA.

4.4 Evidence Destruction

- 4.4.1** Review the Evidence Destruction section of the [Procedure for Toxicology Evidence Handling](#).

4.5 Required Reading

- [State Crime Laboratory Quality Manual](#)
- [State Crime Laboratory Lab-Wide Procedures](#)
- [State Crime Laboratory Toxicology Procedures](#)
- [State Crime Laboratory Evidence Guide](#)
- [State Crime Laboratory Safety Manual](#)
- [Drug Chemistry Section Administrative Policy System](#)
- [Procedure for Toxicology Evidence Handling](#)

5.0 Procedure – Equipment Maintenance

5.1 Top Loading and Analytical Balances

5.1.1 The Chemistry Technician III shall demonstrate balance maintenance and quality control checks according to the Toxicology Unit [Technical Procedure for General Laboratory Equipment](#).

5.1.2 All quality control checks shall be scanned into FA Resource Manager for the specific balance.

5.1.3 Required Reading

- [Technical Procedure for General Laboratory Equipment](#)

5.2 Toxicology Refrigerators and Freezers

5.2.1 The Chemistry Technician III shall demonstrate refrigerator and freezer monitoring as required according to the Toxicology Unit [Technical Procedure for General Laboratory Equipment](#).

5.2.2 All temperature recordings shall be scanned into FA Resource Manager for the specific refrigerator/freezer.

5.2.3 Required Reading

- Toxicology Unit [Technical Procedure for General Laboratory Equipment](#).

6.0 Procedure – Lab Hygiene

6.1 Clean Equipment

6.1.1 The Chemistry Technician III shall demonstrate the ability to clean dirty equipment and other laboratory items for the Toxicology Unit according to the [State Crime Laboratory Safety Manual](#).

6.1.1.1 The technician shall wash any laboratory glassware and other items located in the sinks of each work area as needed or requested.

6.2 Clean Around Common Work Areas

6.2.1 The Chemistry Technician III shall demonstrate general cleaning around common Laboratory work areas throughout the Toxicology Unit according to the [State Crime Laboratory Safety Manual](#).

6.2.1.1 The Chemistry Technician III shall wipe work bench areas in the common work areas, discard any accumulated trash, and replenish any supplies.

7.0 Procedure – Lab Processing Assistance

7.1 Solution Preparations

7.1.1 The Chemistry Technician III shall demonstrate preparing, maintaining, and logging the solutions used in the Toxicology analytical procedures.

7.2 Analytical Processing

7.2.1 The Chemistry Technician III shall demonstrate the ability to assist the Forensic Scientists in the preparation and execution of Toxicology analytical procedures as needed.

8.0 Procedure – Administrative Duties

8.1 Notarize DWI revocation reports

8.1.1 The Chemistry Technician III shall demonstrate the ability to notarize DWI revocation reports and prepare copies.

8.1.1.1 Complete Notary Public training.

8.1.1.2 Notarize DWI Revocation reports signed by the analyst.

8.1.1.3 Scan, import and approve original reports in the Case Object Repository.

8.1.1.4 Make copies for the requesting officer, District Attorney's office, Clerk of Court for the county of offense, Department of Health and Human Services, and Department of Motor Vehicles.

8.1.1.5 Sort and prepare copies for mailing.

8.2 Drug Chemistry, Toxicology, and Bulk Chemical Supply Maintenance

8.2.1 The Chemistry Technician III shall demonstrate the ability to maintain Drug Chemistry and Toxicology supplies as needed.

8.2.1.1 Replenish chemicals and update inventory as needed.

8.2.1.2 Replenish laboratory supplies as needed.

8.3 Utility Vehicle Coordinator Duties

8.3.1 The Chemistry Technician III shall demonstrate Utility Vehicle Coordinator duties according to the [Drug Chemistry Section Administrative Policy System](#).

8.3.1.1 Inspect all Section vehicles on a monthly basis using the following guidelines:

8.3.1.1.1 N.C. State Inspection is current and valid.

8.3.1.1.2 Oil is changed as required by Motor Fleet.

8.3.1.1.3 Attend to any mechanical repairs, recall work, and maintenance.

8.3.1.1.4 Coordinate with the NC State Motor Fleet for major repairs or any maintenance.

8.3.1.1.5 Perform a monthly inspection to insure proper fluid levels, proper equipment, and that all lights function properly.

8.3.1.1.6 Maintain a monthly inspection file for each vehicle.

8.3.1.1.7 Maintain a monthly mileage file for each vehicle.

8.3.1.1.8 Keep records for all repairs or maintenance done to each vehicle.

8.3.1.1.9 Prepare a monthly vehicle report documenting mileage, commercial gas consumption and cost of repairs or maintenance on each Section vehicle.

8.3.1.1.10 Present monthly mileage report to the Section Office Assistant to be entered and turned in to the Logistics Section.

8.3.1.2 Handle paperwork associated with any vehicle collisions.

8.3.1.3 Handle paperwork associated with receiving new vehicles into the Section.

8.4 Scan Case Documents

8.4.1 The Chemistry Technician III shall demonstrate the ability to scan, import and approve case documents.

8.4.1.1 Any case documents received from District Attorney Offices, Defense Attorney Offices, and submitting agencies shall be scanned, imported and approved in the FA case repository.

8.4.1.2 For cases that are in the custody of an analyst, the Chemistry Technician III shall notify the analyst that an additional case document has been received.

9.0 Policy Review, Moot Court

9.1 In this section, the trainee shall be a witness in a moot court. It is not possible to provide a list of all the questions that might be posed in a courtroom. The study questions in this training section shall provide some insight into the type of questioning a witness may experience. The moot court study questions are preparation for the moot court and written answers to those questions are not required to be turned in. Generally, there can be two types of witnesses in a judicial proceeding: a witness to fact and an expert witness. Fact witness testimony is generally limited to what he / she did or observed. The expert witness is generally allowed to testify to fact, draw conclusions, and express opinions relative to their area of expertise.

9.1.1 The Chemistry Technician III shall be prepared at all times to attend court as required.

9.1.2 The Chemistry Technician III shall ensure any leave or other potential conflicts with court appearances are communicated to the Laboratory court coordinator.

9.2 Study Questions – Policy Review

9.2.1 How is an improper seal remediated?

9.2.2 What is a proper seal?

9.2.3 True or False - For evidence received by personal delivery, it is the responsibility of the Laboratory employee receiving evidence directly to ensure the evidence packages are properly sealed and identified.

9.2.4 When shall Lab rooms be locked?

9.2.5 When and how is evidence secured?

9.2.6 How are corrections or changes on case notes or any other document in the case file made?

9.2.7 What shall be done upon receipt of evidence or the return of evidence?

9.2.8 What is the policy for Laboratory case inquiries?

9.2.9 If there is a discrepancy with evidence, what shall you do?

9.2.10 What precautions shall be taken when handling bio-hazardous evidence?

9.2.11 True or False - It is the responsibility of all Laboratory personnel to be aware of possible sources of contamination between items in the same case and between items from different cases and to prevent evidence from deleterious change.

9.3 Study Questions – Moot court

9.3.1 Please state your full name.

9.3.2 How are you employed?

9.3.3 How long have you been employed with the State Crime Laboratory?

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- 9.3.4 What is your educational background?
 - 9.3.5 What are your duties as a Chemistry Technician III?
 - 9.3.6 What training and experience do you have in evidence handling?
 - 9.3.7 When did you receive the evidence?
 - 9.3.8 From whom did you receive it?
 - 9.3.9 Explain the role of Evidence Control at the State Crime Laboratory?
 - 9.3.10 What did you do with the evidence?
 - 9.3.11 What skills do you possess that relate to the duties of a Chemistry Technician III?
 - 9.3.12 What training do you have as a Chemistry Technician?
 - 9.3.13 How is evidence received at the State Crime Laboratory?
 - 9.3.14 Does the lab have policies and procedures governing the handling of evidence?
 - 9.3.15 What is the policy if you find a discrepancy?
 - 9.3.16 Do you have any knowledge of evidence prior to receipt?
 - 9.3.17 Could evidence have been tampered with before you received it?
 - 9.3.18 Have you ever made a mistake?
 - 9.3.19 What would you do if it came to your attention that there was an error in your evidence handling?
 - 9.3.20 What security measures are in place at the State Crime Laboratory?
 - 9.3.21 What precautions are taken to guard against contamination?
 - 9.3.22 What are technical and administrative reviews?
 - 9.3.23 How is blood stored at the Laboratory?

9.4 Required Reading

- Medicolegal Aspects of Alcohol, 5th Ed. 2008, Chapter 16.

10.0 Practical/Laboratory Exercises

- 10.1 Observe the Toxicology Training Coordinator or designee perform the duties listed in sections 4.0 – 8.0 of this training procedure.
- 10.2 Independently demonstrate the duties listed in sections 4.0 – 8.0 of this training procedure.
- 10.3 Learn use of the computer software for Laboratory note taking and report writing (Forensic Advantage) with the Toxicology FA Administrator.

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- 10.4** Review the [Drug Chemistry Section Abbreviation List](#) for acceptable notations used in casework.
- 10.5** Review courtroom testimony with the Toxicology Training Coordinator or designee and the ECU Training Coordinator.
- 10.6** Successfully complete a written exam.
- 10.7** Using all the techniques and principles presented during training, complete the handling and documentation of a competency exam. Document all work as if it were an official case. The competency exam shall be used in a moot court. A Moot Court Evaluation Rating Sheet shall be used to evaluate testimony, refer to the State Crime Laboratory [Procedure for Personnel Training](#).

11.0 References

- James C. Garriott (Editor), *Medicolegal Aspects of Alcohol*, 5th Ed. 2008, Chapter 16.

12.0 Records

- Drug Chemistry Technician III Training Checklist
- New Analyst Core Training Record
- Training Section Completion Summary
- Moot Court Evaluation Rating Sheet

13.0 Attachments – N/A

Revision History		
Effective Date	Version Number	Reason
09/17/2012	1	Original Document
11/15/2013	2	Added issuing authority to header; changed SBI-5 to Request for Examination Form
03/20/2015	3	Reformatted numbering since it was numbered and indented manually 1.0 – added “lab process assistance” Old 3.1.5 (new 3.5) – changed “bulk” to “top loading”, and added “analytical balance” and “pH meter” 4.1.1 – added reference to procedure 4.1.1.1, 4.1.1.2, 4.1.1.3 – removed duplicate reference and defined “FA” Old 4.1.2 was consolidated to new 4.5 The “Practical/Laboratory Exercises” in old sections 4.0 – 8.0 were consolidated into the new section 10.0 4.2.1.1 – 4.2.1.1.8 – removed since they were copied from referenced procedure 4.3 – Deleted body, and referenced procedure since it was copied from the procedure. Moved to 4.4 5.1 – Clarified balances. Inserted new 5.1.2 New 5.2.2 inserted Inserted new 7.0 Moved old 7.1.2.1 to new 8.1.1.1 7.3.1.1 – removed SBI reference Deleted old 7.3.1.4 Deleted old 7.4 Deleted old 7.5.1.1.2 Old 8.5.2 – removed observation requirement